

*LOS ANGELES DISTRICT  
U.S. ARMY CORPS OF ENGINEERS*

**DEPARTMENT OF THE ARMY PERMIT**

**Permittee:** U.S. Fish & Wildlife Service  
Attn: Mr. Jack Fancher  
2730 Loker Avenue West  
Carlsbad, CA 92008

California State Lands Commission  
Attn: Mr. Jim Trout  
100 Howe Avenue, Suite 100 South  
Sacramento, CA 95825-8202

**Permit Number:** 9700-19300-RLK

**Issuing Office:** Los Angeles District

Note: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

**Project Location.** The project is located in the Bolsa Gap between Bolsa Chica Mesa on the northwest and Huntington Mesa on the southeast, in an unincorporated area of northwestern Orange County, California. This site, which encompasses 1,247 acres, lies between Warner Avenue on the northwest, the Pacific Coast Highway (PCH) on the west, and Seapoint Street on the south.

**Project Description:** The Proposed Project is shown on Figure 1 and as follows.

With the proposed plan, at build out, Bolsa Chica would include a 366.5-acre basin that would receive full tidal action, and a 200-acre basin that would receive muted tidal action. To create the full tidal basin, approximately 1.8 million cy of material would be removed from the basin; it would be deepened to support depths varying between 6.8 feet below mean sea level (MSL) and 6.0 feet below MSL. Dredged material would be used to prefill the ebb bar. The remainder of the dredge material would be used to create the full tidal basin levees (456,000cy), three nesting areas (366,000cy), beach nourishment fills (190,000cy), and a raised intertidal shelf for cordgrass (98,300cy). As much as 253,000 cy would be hauled offsite. The full tidal basin would support 175.5 acres of nonwetland waters, 122.6 acres of tidal flats and 19.1 acres of pickleweed, and 49.3 acres of upland habitat and access trails. Following completion of the levees, culvert connections would be installed to admit regular but muted tidal influence to areas already mostly below MSL; this area would form the muted tidal basin. It is expected that the muted tidal basin would support saltmarsh species. It is expected the area would support 1.38 acres of nonwetland waters, 42.3 acres of tidal flats, 30.5 acres of cordgrass habitat, and 126.3 acres of

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tidal pickleweed dominated marsh. Other habitats would include 19.4 acres of perennial pond, 192.2 acres of seasonal ponds/flats, 65.3 acres of nontidal pickleweed, and 216.9 acres of upland and saltgrass. Dredge material could be used onsite to construct other habitat features, including nesting islands, or, if suitable, used to nourish beaches located near the south end of Bolsa Chica State Beach. Of the upland areas, 30 acres would be created to support three nesting habitat islands for the federally-listed California least tern. Other efforts in the tidal areas would include the removal of existing oil wells, water injection wells, well pads, and access roads. It is proposed to leave the seasonal ponds, which are located in the southeastern corner, unchanged at this time; this area encompasses approximately 120 acres. The project would not alter the portions of the State Ecological Reserve known as Inner and Outer Bolsa Bay (about 175 acres) or the area shown as the Future Full Tidal basin (about 250 acres).

In order to provide an adequate volume of good quality marine water to the system, it is proposed to construct a new ocean inlet. The ocean inlet would be large enough to pass tidal flows sufficient to permit the future restoration of an additional 252 acres to tidal influence. As designed, the inlet would be 360 feet in width between the jetty crests and encompass an area of approximately 3.7 acres. As the inlet is cut, it is planned to place the inlet materials on the adjacent beach. Approximately 190,000 cy of sand would be placed for beach nourishment purposes, pending a demonstration that these materials are chemically suitable and physically compatible with the nourishment site materials. To stabilize the inlet, two jetties would be placed to prevent the entrance channel from closing. Each jetty would be approximately 450 feet in length from PCH to the jetty tips. Each jetty would be about 100 feet at their base, virtually all of which would either be under water on the inlet side or under sand on the beach side once completed, except at the tip where they meet the surf zone. The area of beach that would have to be excavated to construct the jetties and the inlet totals about five acres, with the net change being less than three acres of supra-littoral beach being converted to tidal water within the inlet once the jetties are built and the beach prefill is done. The amount of rock in the inlet jetty and under the bridge is about 72,000 tons. Revetments also are proposed to be constructed on each side of the jetties. Following construction, they would be buried under beach sand. The total amount of rock in these is 31,000 tons. Finally, a revetment would be placed east of the bridge for erosion protection in the flood shoal management area of the full tidal basin, amounting to about 138,000 tons.

Based on the engineering report findings, it is predicted that the project would require the creation of an ebb bar to stabilize the down-coast region, near Huntington Cliff, from the loss of the existing beach due to the interruption of littoral sand supply. Due to the impacts associated with the proposed jetty cut, this ebb bar needs to be established before the entrance channel is opened. To assure sand movement along the beach and maintain beach stability, an ebb shoal (also called an ebb bar) would be constructed just outside the inlet mouth. The equilibrium volume of the ebb shoal would be approximately 620,000 cy of sandy material. To provide additional safety, it is proposed to place as much as 1.3 million cy of clean and sandy (>80% sand) material in the proposed ebb shoal location, over approximately 45 acres of soft bottom substrate.

After the inlet is cut, engineering analyses indicated that a flood shoal would form within the inlet. In order to keep the inlet open, maintenance efforts are expected to occur on a biennial basis. Based on the preliminary analyses, it is estimated that approximately 250,000 to 300,000 cy of material would be dredged per episode, every two years, from the inlet; it is proposed that all inlet materials be placed on the down-coast beaches, as far south as Huntington Cliffs, if needed. Sand from the flood shoal maintenance dredging would be placed on the adjacent beaches where needed, as determined by the beach monitoring plan.

In addition, a bridge will be placed to accommodate four traffic lanes and a separate safety vehicle/bikepath for the local beach traffic on PCH. Roadway drainage improvements will be constructed in the inlet/PCH bridge vicinity. Revetments also are proposed to be constructed on each side of the jetties, oceanward of and parallel to PCH. Following construction, they would be buried under beach sand. Finally, a revetment would be placed east of the bridge for erosion protection in the flood shoal management area of the full tidal basin.

Of the upland areas, 20 acres would be created to support three nesting habitat islands for the federally-listed Endangered California least tern and Threatened western snowy plover and 19 acres would be restored to a dune plant community for sensitive species. Other efforts in the tidal areas would include the removal of existing oil wells, water injection wells, well pads, and access roads. Outside the tidal and muted tidal basin, the seasonal ponds and future full tidal area would not be altered. This total area encompasses approximately 387 acres and would remain a mosaic of seasonal ponds, nontidal wetlands, and operating oilfield. The Project also would not alter the portions of the State Ecological Reserve known as Inner and Outer Bolsa Bay (about 210 acres) or the East Garden Grove-Wintersburg Flood Channel (15 acres).

To prevent any rise in the existing, shallow groundwater levels immediately inland of the restored wetlands, a french drain would be constructed between the wetlands and the existing residential houses. This gravel-filled trench would draw down groundwater beneath the houses and discharge it to the restored wetland or existing flood channel. A detailed engineering evaluation would be conducted before the precise design and location of the "french drain" were specified.

By agreement, the USFWS would construct the Project. Construction would occur in four phases and would avoid or minimize impacts to fish and wildlife resources. Phase 1 (September-March) includes clearing and grubbing the full tidal basin, west half bridge and PCH detour construction, inlet construction begins. Phase 2A (March to September) includes completion of PCH bridge, levees and revetments of the full tidal basin, the French drain, cordgrass shelf, and preparations to begin dredging in the full tidal basin. Phase 2B includes hydraulic dredging of the full tidal basin, pre-filling the ebb shoal, constructing inlet jetties, PCH revetments, and nesting areas. Phase 3 includes muted tidal area culverts, salvage revegetation, and removal of some staging areas. Phase 4 includes completion of dredging, if necessary, opening of the inlet, and demobilization of construction equipment.

#### **Permit Conditions:**

##### **General Conditions:**

- 1 The time limit for completing the authorized activity ends on April 1, 2011. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
- 2 You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 7 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification from this permit from this office, which may require restoration of the area.

3 Your use of the permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States. Note: this condition applies to ocean construction activities only and is not intended to constrain management options of the restored wetlands.

4 You must have a copy of this permit available on the vessel used for the authorized transportation and disposal of dredged material.

5 You must install and maintain, at your expense, any safety lights and signals prescribed by the United States Coast Guard (USCG), through regulations or otherwise, on your authorized facilities.

6 If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

7 If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

8 You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished with the terms and conditions of your permit.

9 The Permittees understand and agree that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the Permittees will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

#### **Special Conditions:**

1 This permit authorizes the construction of the project described herein (or as modified by the Permittees and approved by the Corps under Special Condition No. 5 below). In addition, this permit authorizes two maintenance-dredging operations, providing additional analyses are submitted to the Corps, Regulatory Branch, and demonstrate material suitability and compatibility, per the Inland Testing Manual (Corps/EPA). If Regulatory Branch does not provide an approval letter within 45-days of receipt, the Permittee(s) can assume approval.

2 All plans required per the EIS mitigation specifications, as identified in the Table below, shall be provided to the Corps, Regulatory Branch. The Corps, Regulatory Branch will provide comments within a 14-calendar day review period, if necessary. If comments are not provided within the 14-day period, the Permittees can assume the Corps, Regulatory Branch, has no concerns with the plan(s).

3 The Biological Resources Monitoring Plan has been developed by the USFWS and a copy has been provided to the Corps, Regulatory Branch. The USFWS shall be responsible for implementing the plan. Monitoring reports shall be provided to the Corps, Regulatory Branch, on an annual basis.

4 The Shoreline Monitoring Plan has been developed by the USFWS and a copy has been provided to the Corps, Regulatory Branch. The USFWS shall be responsible for implementing the Shoreline Monitoring Plan. Monitoring reports shall be provided to Regulatory Branch, on an annual basis. The long-term managers, the USFWS/CSLC or future transferees (see General Condition No. 7 above) will be responsible for the monitoring program and future maintenance activities. Prior to the placement of future dredge materials on or in the near-shore environment, additional analyses demonstrating material suitability and compatibility, which could be accommodated under a Letter of Permission, per Section 10 of the RHA and Section 404 of the CWA, providing the action is not controversial and results in minimal impacts only, shall be submitted to Regulatory Branch.

5 No work is permitted until the Permittees obtain a Notice to Proceed (NTP) from the Corps, Regulatory Branch. The Corps, Regulatory Branch, may issue a NTP upon receipt and approval of the Construction Operations (CO) Plan. If the Permittees do not receive comments on the CO/M plans within 60 calendar days from the date of receipt, the Permittees can assume the NTP is issued. The Construction Operations Plan shall include:

- Revised Construction Schedule, Practices and Safety Measures, and Best Management Practices.
- Sediment Suitability Documentation to Support Proposed Beach Nourishment Efforts with Channel Materials.
- Final Plans and Specifications.
- Local Mariner's Notification.
- Cultural Resources Monitoring Plan.
- Air Quality Conformity Determination and Local/Regional Air Permits.

6 The Permittees shall provide a post-construction report to the Corps, Regulatory Branch, within 90 days of project completion. This report shall document compliance with all general and special conditions defined in this permit. This report shall include:

- Start and completion date of project. The report shall indicate whether all general and special permit conditions were met. Any violations of the permit shall be explained in detail.
- As Built Construction Plans. This plan shall identify dredge areas, disposal sites, and volumes per site. In addition, a duly authorized representative of the Permit shall sign this plan.
- A copy of the post-dredging condition survey shall be sent also to the National Ocean Service to update navigational charts. The survey shall be sent to: NOAA/National Ocean Service, Map and Chart Branch, ATTENTION: N/CG2211, SSMC3, Room 6211, 1315 East-West Highway, Silver Spring, Maryland 20910.

| #  | Mitigation Measure  | Time Frame For Implementation   | Monitoring Agency                   | Verification/ Monitoring Action   | Timing of Verification   |
|--|---|---|-------------------------------------|---|--|
| <b>SURFACE AND GROUNDWATER HYDROLOGY</b>   |   |   |                                     |   |  |
| 1.   | <p>Potential impacts to groundwater in residential areas located north and adjacent to the Lowlands of the project site. The following shall occur:</p> <ol style="list-style-type: none"> <li>1. The ability of a dewatering trench to effectively manage high groundwater levels shall be evaluated by a groundwater engineer prior to selecting a dewatering system design. Specifically, the design shall consider the exact locations and dimensions of the full and muted tidal basins relative to the adjacent community, the hydraulic properties of the shallow water-bearing zone, the actual elevation range of water levels in the basins, and the final ground surface elevation grade along the inland edge of the wetland.</li> <li>2. A groundwater monitoring, action, and maintenance plan shall be developed by a groundwater engineer prior to construction. The plan shall provide monitoring measures and actions to be taken (if any) if severe flooding alters the amount or pattern of sediment deposition and surface elevations within the wetland, and/or adversely affects the ability of the dewatering trench to perform its functions. This plan shall address measures, such as a supplemental pumping system, that could be implemented if monitoring data indicate potential problems with the drainage system.</li> </ol> | <p>Evaluation prior to selection of a dewatering system design and prior to site construction.</p> <p>Plan prepared prior to construction.</p> <p>Monitoring to be conducted in accordance with the Plan.</p> | <p>CSLC/USFWS</p> <p>CSLC/USFWS</p> | <p>Review, selection and approval of the dewatering system. Coordination with County of Orange and City of Huntington Beach as appropriate.</p> <p>Review and approval of Plan. Coordination with County of Orange and City of Huntington Beach as appropriate.</p> <p>Monitoring verification periodically as per actions presented in Plan.</p> | <p>Prior to initiation of construction.</p> <p>Prior to construction.</p> <p>Periodically as per Plan.</p> |
| <b>WATER QUALITY AND AQUATIC RESOURCES</b> |   |   |                                     |   |  |
| 2.   | <p>An oil spill contingency plan shall be prepared specifying detailed measures to be taken to protect the Bolsa Chica wetlands in the event of an offshore oil spill. The plan shall identify the necessary equipment, such as a boom to block the tidal inlet, to be readily available, its storage and deployment. Such plan shall be coordinated with existing plans of area oil and gas generators and may consider equipment available under such plans.</p>  | <p>Prior to construction of the ocean inlet.</p>  | <p>CSLC</p>                         | <p>Review and approval of Plan with concurrence or approval by other agencies, as appropriate.</p> <p>Periodic inspection of equipment.</p>   | <p>Prior to construction of the ocean inlet.</p> <p>Throughout period of construction.</p>                 |

| #   | Mitigation Measure  | Time Frame For Implementation                       | Monitoring Agency  | Verification/<br>Monitoring Action                                      | Timing of Verification                                     |
|---|---|---|--------------------|---|--|
| <b>BIOLOGICAL RESOURCES - AQUATIC RESOURCES</b> |   |   |                    |   |  |
| 3.  | During flood shoal maintenance dredging, no sand shall be placed on the wave-washed beach face during the grunion spawning season (between March through August) to avoid interference with spawning or damage to grunion eggs.   | At beginning of inlet maintenance dredging actions. | CSLC/USFWS or CDFG | Site inspection and reporting.  | During flood shoal maintenance dredging.                   |
| <b>BIOLOGICAL RESOURCES - VEGETATION</b>        |   |   |                    |   |  |
| 4.  | Coastal woolly-heads is an annual species whose distribution and abundance can change from year to year. Therefore, to salvage as many seeds as possible from plants that might be flooded within the tidal margins of Rabbit Island, an updated map of the coastal woolly-heads population shall be prepared. This map will specifically identify the areas that would be potentially affected under full tidal conditions, as well as identify other areas of potentially suitable habitat on Rabbit Island.  | Prior to construction of the full tidal basin       | CSLC/USFWS or CDFG | Review and approval of the map and salvage plan by CSLC, USFWS and CDFG | Prior to the start of construction of the full tidal basin |
| 5.  | To compensate for the loss of the Coastal woolly-heads population on Rabbit Island due to the introduction of tidal flows around its edges, seed shall be salvaged from the affected areas prior to construction in the first year, and redistributed across the non-affected, occupied portions of the habitat. If sufficient seed appears to be available, a portion of the seed supply shall be set aside for viability tests and possible redistribution after construction. Data regarding viability of seeds kept in storage are typically required for any kind of management plan for rare plant species. | Prior to construction of the full tidal basin       | CSLC/USFWS or CDFG | Verification of seed salvage and storage by CSLC, USFWS and CDFG        | Prior to the start of construction of the full tidal basin |
| 6.  | If the affected margins of Rabbit Island occupied by coastal woolly-heads do not support a substantial non-native weed population, the top 3 inches of sand shall also be salvaged in the expectation that a seed bank of coastal woolly-heads may be present. This salvaged sand shall be redistributed across other parts of Rabbit Island that are not occupied by coastal woolly-heads but is potentially suitable habitat.   | Prior to construction of the full tidal basin       | CSLC/USFWS or CDFG | Verification of soil salvage and storage by CSLC, USFWS and CDFG        | Prior to the start of construction of the full tidal basin |
| 7.  | A management and monitoring plan shall be prepared to address the long-term viability of the Rabbit Island population of coastal woolly-heads. The plan shall include identification of sites elsewhere in coastal Orange County, preferably within existing preserves, that might serve as translocation sites for the species, or at least be restored as such, in the event that monitoring of the Rabbit Island population indicates population decline and possible extirpation.   | Prior to construction of the full tidal basin       | CSLC/USFWS or CDFG | The plan shall be reviewed and approved by CSLC, USFWS, and CDFG        | Prior to the start of construction of the full tidal basin |

| #                                   | Mitigation Measure  | Time Frame For Implementation  | Monitoring Agency  | Verification/<br>Monitoring Action   | Timing of Verification  |
|-------------------------------------|---|--|--------------------|--|---|
| 8.                                  | If coastal woolly-heads are found to occur within the area that would become tidally influenced and if seed from affected plants cannot be successfully propagated at an alternate site prior to opening of the tidal inlet, then the area where plants occur that would be affected by tidal inundation shall be protected from tidal flow by a dike or other barrier.   | Prior to opening of the tidal inlet  | CSLC/USFWS or CDFG | The need for and construction of a protective barrier shall be determined by and verified by CSLC, USFWS and CDFG  | Prior to opening of the tidal inlet   |
| <b>Biological Resources - Birds</b> |   |  |                    |  |   |
| 9.                                  | To compensate for the potential interim loss of the State endangered Belding's savannah sparrow breeding territories at Bolsa Chica, staging areas, temporary access roads, and all other construction activities shall avoid pickleweed habitat to the greatest extent possible, in addition to the water management of pickleweed habitat proposed as part of the project.  | Pickleweed shall be mapped prior to construction and an avoidance plan shall be developed prior to construction. Sensitive pickle-weed areas, as determined by the USFWS, that can be feasibly avoided shall be flagged prior to construction and avoided during construction. | CSLC/USFWS         | The pickleweed avoidance plan shall be reviewed by CSLC, USFWS, and CDFG. Flagging of pickleweed areas to be avoided shall be done by a biological monitor approved by CSLC, USFWS and CDFG. Avoidance shall be verified by the approved monitor who will submit monitoring reports to CSLC/USFWS. | The pickleweed avoidance plan shall be approved prior to construction. Monitoring reports shall be submitted at approved intervals during construction. |
| <b>Land Ownership and Land Use</b>  |   |  |                    |  |   |
| 10.                                 | For the temporary loss of Bolsa Chica State Beach parking area and beach area used during construction: Identify available parking area(s) within the City of Huntington Beach, develop agreements to use such parking, and operate a shuttle system between the parking and beach areas. This parking and shuttle arrangement shall be subject to the same fees charged by the DPR and be used during summer holidays and weekends during construction of the inlet. | At beginning of construction interference with summer beach parking and use.   | CSLC/USFWS         | Identify available parking area(s) within the City of Huntington Beach, develop agreements to use such parking, and operate a shuttle system between the parking and beach areas.  | Periodic verification of program during summer holidays and weekends during period of inlet construction affecting beach and parking use.               |
| 11.                                 | For any temporary loss of restroom facilities on either side of the beach staging/inlet construction area: Provide temporary public restroom facilities during the peak season on both sides of the inlet construction area. Provide access to the beach area to the south of the staging area.   | At beginning of construction interference with summer beach use.   | CSLC/USFWS         | Rent temporary restroom facilities for placement on either side of inlet. Assure beach access to south of staging area. Provide campers with utilities.  | Prior to beginning of each summer that construction affects this area.  |
| <b>RECREATION</b>                   |   |  |                    |  |   |
| 12.                                 | Provide safety measures consisting of warning signage to increase public awareness and provide lifeguard stations on the beach in the area adjacent to the jetties. These measures shall address public safety related to the jetties and the tidal inlet.  | At beginning of inlet construction.  | CSLC/USFWS         | Develop agreement with State Department of Parks and Recreation for implementation.  | Periodically monitor during course of construction or as per agreement.   |
| <b>TRAFFIC AND CIRCULATION</b>      |   |  |                    |  |   |



| #   | Mitigation Measure  | Time Frame For Implementation  | Monitoring Agency                                | Verification/<br>Monitoring Action  | Timing of Verification  |
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| 13.                                       | Project construction shall employ an access plan consisting of flaggers and/or temporary signalization to compensate for public safety issues that could occur due to conflicts between construction traffic and local residents at Seapoint Avenue.  | At beginning of construction actions accessing that side of the Project. | CSLC/City of Huntington Beach                    | Plan development, review and approval. Coordination with City of Huntington Beach as necessary.<br><br>On-site monitor to assure compliance and report violations.  | Prior to construction.<br><br>Periodically for duration of project.         |
| 14.                                       | To compensate for traffic conflicts due to construction vehicle turning movements at the PCH staging area, a traffic control plan shall be developed and implemented to provide signage and/or flaggers alerting motorists to trucks entering PCH. The use of flaggers may be appropriate to handle trucks entering the site during daytime hours.  | At beginning of construction actions accessing that side of the Project. | CSLC/USFWS/<br>Caltrans/City of Huntington Beach | Plan development, review and approval. Coordination with City of Huntington Beach as necessary.<br><br>On-site monitor to assure compliance and report violations.  | Prior to construction.<br><br>Periodically for duration of project.         |
| <b>Air Quality - Phase I Construction</b> |   |  |  |   |   |
| 15.                                       | To reduce NO <sub>x</sub> and PM <sub>10</sub> construction emissions, a construction plan shall be submitted denoting the proposed schedule and projected equipment use. The construction contractor will provide evidence that low-emissions mobile construction equipment would be used, or that their use was investigated and found to be infeasible for the project. The contractor shall also conform to any construction measures imposed by the SCAQMD.  | Prior to the issuance of grading permits.                                | CSLC/USFWS                                       | Plan review and approval by County of Orange.<br><br>On-site monitor to assure compliance with Plan. Violations to be reported to CSLC, USFWS, and County of Orange.  | Prior to construction grading.<br><br>Periodically for duration of project. |
| 16.                                       | To reduce impacts related to PM <sub>10</sub> emissions, the Fugitive Dust (PM <sub>10</sub> ) Mitigation Plan shall be completed to comply with Rule 403. The plan shall identify methods to control fugitive dust through implementation of reasonable available control measures in sufficient frequencies and quantities to prevent visible emissions from crossing the property line to the adjacent residents. Provisions of the plan shall include, but not be limited to, the stipulation that all areas of active earth movement shall be maintained at a soil moisture content of at least 12 percent as determined by ASTM Method D-2216. This stipulation shall not be applied to any areas requiring compaction where a less than 12 percent moisture content would be required. The required moisture content may be achieved through regular site watering or through natural means such as excavation in wet areas. | Prior to the issuance of grading permits.                                | CSLC   | Plan review and approval by County of Orange.<br><br>On-site monitor to assure compliance with Plan. Violations to be reported to CSLC, USFWS, and County of Orange. Soil moisture monitoring to be conducted by certified soil engineer. | Prior to construction grading.<br><br>Periodically for duration of project. |
| 17.                                       | The need for emission offset credits to compensate for excess construction emissions, shall be determined.  | At time of grading plan submittal.                                       | CSLC/USFWS                                       | Coordination with SCAQMD.   | Prior to construction.  |

| #   | Mitigation Measure  | Time Frame For Implementation                              | Monitoring Agency | Verification/<br>Monitoring Action   | Timing of Verification                |
|-----|---|--|-------------------|--|---------------------------------------|
| 18. | All construction equipment shall be maintained in good operating condition to reduce operational emissions. The contractor shall ensure that all construction equipment is properly serviced and maintained in accordance with the manufacturers' specifications.   | Prior to and during construction.                          | CSLC/USFWS        | On-site monitor to assure compliance with Plan. Violations to be reported to CSLC and the USFWS. | Periodically for duration of project. |
| 19. | Where applicable, equipment and trucks shall not be left idling for prolonged periods (i.e., in excess of 5 minutes) to reduce emissions associated with construction equipment.  | During construction.                                       | CSLC/USFWS        | On-site monitor to assure compliance with Plan. Violations to be reported to CSLC and the USFWS. | Periodically for duration of project. |
| 20. | To the extent feasible, truck deliveries both to and from the site shall be limited to off-peak hours to reduce concentration of construction emissions.  | Prior to and during construction.                          | CSLC/USFWS        | On-site monitor to assure compliance with Plan. Violations to be reported to CSLC and the USFWS. | Periodically for duration of project. |
| 21. | The use of an electric hydraulic dredge for excavation of the full tidal basin is preferred to reduce construction emissions.   | At the start of full tidal basin construction.             | CSLC/USFWS        | On-site monitor to assure compliance with Plan. Violations to be reported to CSLC and the USFWS. | Periodically for duration of project. |
| 22. | To the extent reasonably feasible, the contractor shall use available sources of onsite electrical power to operate any required small-scale equipment.   | At the beginning of and during construction.               | CSLC/USFWS        | On-site monitor to assure compliance with Plan. Violations to be reported to CSLC and the USFWS. | Periodically for duration of project. |
| 23. | Where appropriate, the disturbed areas above the mean high tide line shall be revegetated within 30 days of the cessation of disturbance activities to reduce impacts related to PM <sub>10</sub> emissions. Nesting areas and roads will be left unvegetated. This action shall be coordinated through biological resources specialists. | Within 30 days of the cessation of disturbance activities. | CSLC/USFWS        | On-site monitor to assure compliance with Plan. Coordination with USFWS.                         | As necessary for duration of project. |
| 24. | When land-based equipment is used for excavation, the area of active construction shall be limited to 25 acres at any one time unless existing soil moisture is present.  | At the beginning of and during construction.               | CSLC/USFWS        | On-site monitor to assure compliance with Plan. Violations to be reported to CSLC and the USFWS. | Periodically for duration of project. |
|     |   |  |                   |  |                                       |

| #  | Mitigation Measure   | Time Frame For Implementation  | Monitoring Agency  | Verification/<br>Monitoring Action  | Timing of Verification   |
|--|--|--|--------------------|---|--|
| <b>AIR QUALITY - MAINTENANCE DREDGING</b>  |  |  |                    |   |  |
| 25.  | If a diesel dredge is to be used for maintenance dredging, dredge activities shall include fuel injection retardation and selective catalytic reduction, operations shall be restricted to no more than 9 hours per day. See Mitigation Measure #21 herein.  | To be implemented at the start of any use of a diesel dredge.  | CSLC/USFWS or CDFG | On-site monitor to assure compliance with Plan. Violations to be reported to CSLC and the USFWS/CDFG. | Periodically for duration of use of diesel dredge.                     |
| <b>Air Quality - Phase II Construction</b> |  |  |                    |   |  |
| 26.  | NO <sub>x</sub> emissions shall be mitigated to the extent feasible by use of fuel injection retardation and selective catalytic reduction applied to the tug, the dredge, all generators, and any necessary diesel powered pumps.   | To be implemented at the beginning of Phase II.  | CSLC/USFWS or CDFG | On-site monitor to assure compliance with Plan. Violations to be reported to CSLC and the USFWS/CDFG. | Periodically for duration of project after Phase II begins.            |
| <b>NOISE - CONSTRUCTION</b>                |  |  |                    |   |  |
| 27.  | Haul trucks shall not enter the site at Graham Street, Talbert Avenue, or Springdale Street in order to protect local residents from excessive noise.  | When haul trucks begin to operate in this area.  | CSLC/USFWS         | On-site monitor to assure compliance with Plan. Violations to be reported to CSLC and the USFWS.      | Periodically for duration of project construction.                     |
| 28.  | Haul truck traffic shall be restricted to those hours designated for site construction, i.e., 7:00 a.m. to 8:00 p.m. Monday through Saturday.  | At the beginning of haul truck use.  | CSLC/USFWS         | On-site monitor to assure compliance with Plan. Violations to be reported to CSLC and the USFWS.      | Periodically for duration of project construction.                     |
| <b>Noise - Post-Construction</b>           |  |  |                    |   |  |
| 29.  | If an internal combustion dredge is used for maintenance dredging of the flood shoal, no dredging shall be performed between the hours of 10:00 p.m. and 7:00 a.m. or on Sundays or federal holidays within 700 feet of any residential unit to protect against excessive noise intrusion. Furthermore, all dredging shall be performed outside of the breeding and nesting seasons for local fauna.<br><br>If an electric dredge is used, no time limitations need be imposed. See Mitigation Measure #21 herein. | At the beginning of maintenance dredging activities when and if an internal combustion dredge is used. | CSLC/USFWS or CDFG | On-site monitor to assure compliance with Plan. Violations to be reported to CSLC and the USFWS/CDFG. | Periodically for duration of any use of an internal combustion dredge. |


### Further Information:

- 1 Congressional Authorities. You have been authorized to undertake the activity described above pursuant to:  
  - (X) Section 10 of the River and Harbor Act of 1899 (33U.S.C.403).
  - (X) Section 404 of the Clean Water Act (33U.S.C.1344).
- 2 Limits of this authorization.
  - a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
  - b. This permit does not grant any property rights or exclusive privileges.
  - c. This permit does not authorize any injury to the property or rights of others.
  - d. This permit does not authorize interference with any existing or proposed Federal project.
- 3 Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
  - a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
  - b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
  - c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
  - d. Design or construction deficiencies associated with the permitted work.
  - e. Damage claims associated with any future modification, suspension, or revocation of this permit.
- 4 Reliance on Permittees' Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
- 5 Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to:
  - a. You fail to comply with the terms and conditions of this permit.
  - b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
  - c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

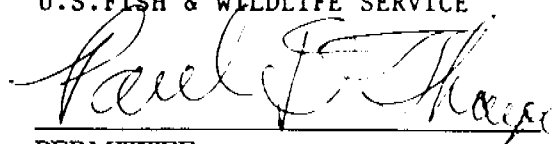
Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measure ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

- 6 Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give you favorable consideration to a request for an extension of this time limit.

Your signature below, as Permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.


  
PERMITTEE JIM BARTEL, FIELD SUPERVISOR  
CARLSBAD FISH & WILDLIFE OFFICE  
U.S. FISH & WILDLIFE SERVICE

6/21/02  
DATE

  
PERMITTEE  
Paul D. Thayer  
Executive Officer  
CA State Lands Commission

8/3/2002  
DATE

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

  
Mark F. Sudol, D.Env.  
Chief, Regulatory Branch

14 Aug. 2002  
DATE

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

\_\_\_\_\_  
TRANSFEEEE

\_\_\_\_\_  
DATE

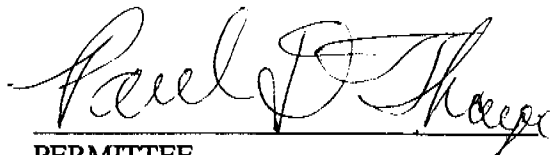
\_\_\_\_\_  
TRANSFEEEE

\_\_\_\_\_  
DATE

Your signature below, as Permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

\_\_\_\_\_  
PERMITTEE

\_\_\_\_\_  
DATE



PERMITTEE  
Paul D. Thayer  
Executive Officer  
CA State Lands Commission

  
DATE

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

\_\_\_\_\_  
Mark F. Sudol, D.Env.  
Chief, Regulatory Branch

\_\_\_\_\_  
DATE

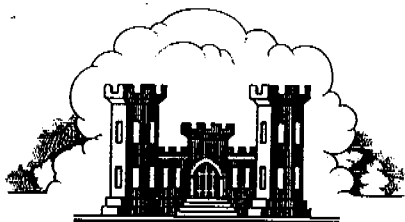
When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

\_\_\_\_\_  
TRANSFEREE

\_\_\_\_\_  
DATE

\_\_\_\_\_  
TRANSFEREE

\_\_\_\_\_  
DATE



*LOS ANGELES DISTRICT  
U.S. ARMY CORPS OF ENGINEERS*

**CERTIFICATION OF COMPLIANCE WITH  
DEPARTMENT OF THE ARMY PERMIT**

**Permit Number:** 9700-19300-RLK

**Name of Permittee:** U.S. Fish & Wildlife Service  
Attn: Mr. Jack Fancher  
2730 Loker Avenue West  
Carlsbad, CA 92008

California State Lands Commission  
Attn: Mr. Jim Trout  
100 Howe Avenue, Suite 100 South  
Sacramento, CA 95825-8202

**Date of Issuance:**

Upon completion of the activity authorized by this permit, sign this certification and return it to the following address:

Regulatory Branch - Los Angeles District Office  
ATTN: CESPL-CO-R-970019300-RLK  
P.O. Box 532711  
Los Angeles, California 90053-2325

Please note that your permitted activity is subject to a compliance inspection by an Army Corps of Engineers representative. If you fail to comply with this permit you may be subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of said permit.

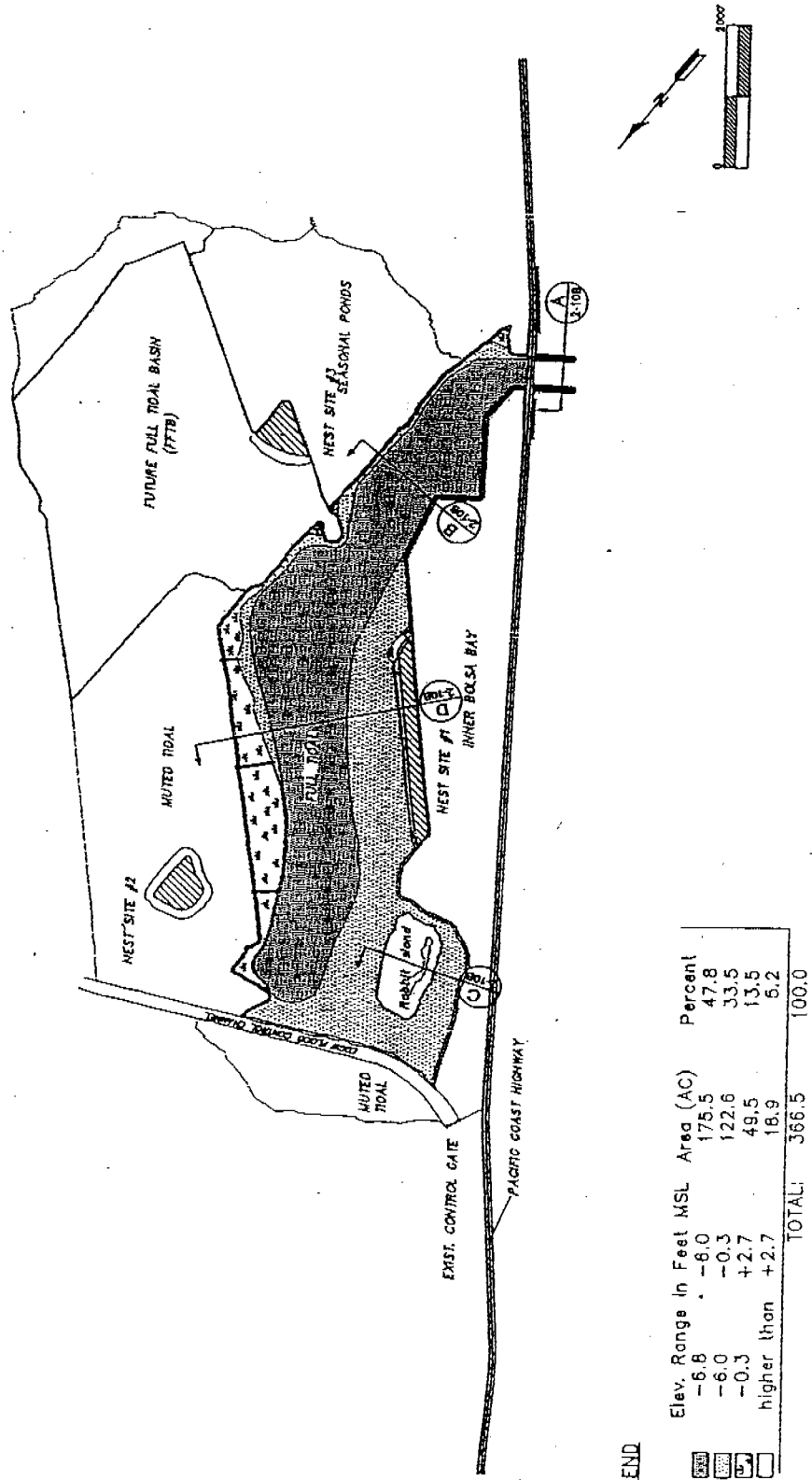
\_\_\_\_\_  
Signature of Permittee

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Permittee

\_\_\_\_\_  
Date

**FIGURE 1**



**LEGEND**

| Elev. Range in Feet MSL | Area (AC)    | Percent      |
|-------------------------|--------------|--------------|
| -6.8                    | 175.5        | 47.8         |
| -6.0                    | 122.6        | 33.5         |
| -0.3                    | 49.5         | 13.5         |
| +2.7                    | 18.9         | 5.2          |
| higher than +2.7        |              |              |
| <b>TOTAL:</b>           | <b>366.5</b> | <b>100.0</b> |

